

XIV. *Characters of undescribed Diptera in the Collection of W. W. Saunders, Esq., F.R.S., &c. By FRANCIS WALKER, Esq., F.L.S., &c.*

[Read 2nd February, 1857.]

HAVING been favoured by the kindness of Mr. Saunders with the opportunity of describing the new species of Exotic *Diptera* in his collection, I beg leave to offer the MSS. to the Entomological Society: Each family is accompanied by a synopsis of some or of all of the genera contained in it, excepting those which have been lately registered in the 1st, 2nd and 3rd parts (2nd series) of the British Museum Catalogue of *Diptera*.

BRACHYCERA.

Fam. 1. STRATIOMIDÆ.

In the British Museum Catalogue of *Diptera*, 2nd series, Part I. about 379 species of this family are enumerated. The first and third numbers of the Journal of the Proceedings of the Linnean Society contain descriptions of eleven additional species of three new genera discovered in Malacca, Singapore and Borneo by Mr. Wallace. Macquart, in the Fourth Supplement to his "Diptères Exotiques," describes about twenty-five new species and three new genera (*Heteracanthia*, *Toxocera* and *Campeprosopa*), and lastly, Loew, in the Verhand. Zool. Botan. Verein in Wien, v. (1855), gives a synopsis of the genera, to which he adds the five following:—

1. *Plecticus*. Type, *Sargus testaceus*, Fabr. Four new species, of which *Pl. apicalis* is synonymous with *Sargus luridus*, Walk. Journ. Proc. Linn. Soc. 1, 8.
2. *Merosargus*. Type, *Sargus fasciatus*, Fabr. Two new species.
3. *Chrysonotus*. Type, *Sargus bipunctatus*, Scop.
4. *Microchrysa*. Type, *Chrysomyia polita*, Linn.
5. *Analcocerus*. Type, *A. nigriceps*, Loew. One new species.

The eleventh volume of the Linnæa Entomologica contains "Beitrag zur Kenntniss exotischer Stratiomyiden von Dr. A.

Gerstäcker." He describes the following genera and species :—

1. *Cyphomyia*. Twenty-four species, eleven or twelve of which are new.
2. *Chordonota*, N. G. Type, *Cyphomyia inermis*, Wied.
3. *Euparyphus*, N. G. Type, *Cyphomyia elegans*, Wied.
4. *Stratiomys*. Nine species, five of which are new, two Mexican, two South American, and one South African.
5. *Ptilocera*. Three species, two of which are new, one from Ceylon, and one from Port Natal.
6. *Acanthina*. Two species, both of which are new, one from Brazil, and one from Ceylon.
7. *Chauna*. One species.
8. *Blastocera*, N. G. One Brazilian species.
9. *Spyridopa*, N. G. One Brazilian species.
10. *Panacris*, N. G. One Cayenne species,

#### GENUS ACANTHINA, Wied.

##### *Acanthina porcata*.

*Mas.*—Nigra, antennis lanceolatis ferrugineis apice nigris thorace non longioribus, thorace strigis marginalibus argenteo-tomentosis, scutello spinis ferrugineis, abdomine crasso contracto brevi lato strigis marginalibus argenteo-tomentosis, genubus halteribusque fulvis, alis vix cinerascensibus, stigmatem maximo venisque nigris, his basi ferrugineis.

*Male.*—Black; antennæ lanceolate, ferruginous with black tips, not longer than the thorax; thorax with marginal streaks of silvery tomentum; scutellum with ferruginous spines; abdomen thick, contracted, broader and much shorter than the thorax, with marginal streaks of silvery tomentum; knees and halteres tawny; wings very slightly greyish, with a large black stigma; veins black, ferruginous at the base.

Length of the body 3 lines; of the wings 6 lines.

Amazon Region.

##### *Acanthina longicornis*.

*Fcem.*—Nigra, capite thoraceque cinereo-tomentosis, antennis linearibus thorace vix brevioribus, thorace strigis obscurè rufescentibus, abdomine dilatato strigis marginalibus radiatis argenteo-tomentosis, tarsis testaceis apice nigris, alis cinereis nebula costali nigricante, venis nigris, halteribus ferrugineis.

*Female*.—Black; head and thorax with cinereous tomentum; antennæ filiform, nearly as long as the thorax; thorax with dull reddish streaks; abdomen not longer than broad, much broader than the thorax, with radiating marginal streaks of silvery tomentum; tarsi testaceous, with black tips; wings grey, with a blackish tinge by the costa adjoining the discal areolet; veins black; halteres ferruginous.

Length of the body 3 lines; of the wings 6 lines.

Amazon Region.

### Genus STRATIOMYS, Geoff.

#### *Stratiomys inanimis*.

Testacea aut viridis, antennis pallidè fulvis, thorace fascia vittisque duabus latis nigris, alis limpidissimis, venis pallidè testaceis.

Testaceous (green when living); antennæ pale tawny; thorax with two broad black stripes, and with a black band in front of the scutellum; wings quite limpid; veins pale testaceous.

Length of the body 4 lines; of the wings 6 lines.

China.

### Fam. 2. XYLOPHAGIDÆ.

Thirty-six species of this family have been described.

#### Genus XYLOPHAGUS.

#### *Xylophagus basipunctatus*.

Niger, subtus fulvus, capite apud oculos argenteo, subtus albo-piloso, antennis, thoracis lateribus, pectore, abdominis lateribus subtus apiceque pedibusque fulvis, pectore abdomineque argenteo-tomentosis albo-pilosis, abdomine fasciis tribus albis, apicem versus nigro-piloso, tarsis nigris, tibiis anterioribus, genibus posticis tarsisque posterioribus basi testaceis, alis sublimpidis, fascia abbreviata apiceque cinereis, halteribus fulvis apice albidis.

Black, tawny beneath; head with silvery tomentum about the eyes and with white hairs beneath; antennæ tawny; first and second joints bristly, second very short, third lanceolate, shorter than the first; thorax tawny along each side; pectus tawny, with silvery tomentum and white hairs; abdomen tawny on each side, beneath and at the tips, mostly covered with silvery white tomentum, with white hairs towards the base, and with short black hairs to-

wards the tip, second, third and fourth segments with white hind borders; legs tawny; anterior tibiæ and hind knees testaceous; tarsi black; posterior tarsi testaceous at the base; wings nearly limpid, grey towards the tips, and with an incomplete grey band in front of the middle; veins black, testaceous at the base; halteres tawny, with whitish tips.

Length of the body 4 lines; of the wings 7 lines.

Australia.

### Fam. 3. TABANIDÆ.

Many new and yet undescribed species of this family have been discovered since 830 species were recorded in the above-mentioned Catalogue. Seven new species are described in the Linnean Society Journal, and Macquart, in his fourth Supplement, describes thirty-nine new species, and two new genera, *Mesomyia* and *Pelecorhynchus*.

#### GENUS TABANUS, Linn.

##### *Tabanus imponens.*

*Fœm.*—Cervinus, capitis callo ferrugineo longo gracili, thorace cano-subtomentoso, tarsis nigris, tibiis posticis nigro vix ciliatis, alis cinereis, halteribus apice albidis.

*Female.*—Fawn colour; head with a long slender uninterrupted ferruginous callus; proboscis ferruginous; antennæ broken; thorax and pectus with a slight hoary bloom; abdomen unvaried; tarsi black; hind tibiæ with a very narrow black fringe; wings grey; veins ferruginous; halteres with whitish tips.

Length of the body 8 lines; of the wings 16 lines.

Pará.

##### *Tabanus uncinatus.*

*Fœm.*—Niger, antennis subarcuatis, articuli 3<sup>i</sup> dente valido brevissimo, thoracis lateribus scutelloque obscurè ferrugineis, abdominis fascia albida, tibiis albis apice nigris, alis cinereis, venis nigris.

*Female.*—Black; antennæ slightly curved; third joint with a very short and stout tooth; sides of the thorax and scutellum dark ferruginous; abdomen with a whitish band at two-thirds of the length; tibiæ white, with black tips; wings grey; veins black; fore branch of the cubital vein curved at its base, nearly straight

from thence to the tip ; subanal vein joining the anal at some distance from the border.

Length of the body 5 lines ; of the wings 9 lines.

Pará.

*Tabanus bitinctus.*

*Fœm.*—Piceus, capitis callo longo angusto, antennis nigris arcuatis, cornu distincto, abdomine ferrugineo, apice nigricante, alis obscurè cinereis, venis nigris, halteribus apice albidis.

*Female.*—Piceous ; head with a long, slender and uninterrupted callus ; antennæ black, curved, with a distinct horn at the base of the third joint ; abdomen ferruginous, blackish at the tip ; wings dark grey ; veins black ; fore branch of the cubital vein simple, forming a distinct obtuse angle near its base, almost straight from thence to its tip ; subanal vein joining the anal at some distance from the border ; halteres with whitish tips.

Length of the body 6 lines ; of the wings 12 lines.

Pará.

*Tabanus cingulifer.*

*Fœm.*—Piceus, capitis callo nigro angusto antice subdilato, antennis nigris, articulo 3<sup>o</sup> subdilato, thoracis lateribus, scutello pectoreque cano-tomentosis, abdominis segmentis cano-marginatis, pedibus nigris, tibiis albo latè cinctis, alis cinereis, venis stigmatæque nigris.

*Female.*—Piceous ; head with a slender black shining callus, which is slightly dilated in front ; proboscis, palpi and antennæ black, the latter slightly dilated and angular at the base of the third joint, but without a horn ; sides of the thorax, scutellum and pectus with a hoary tinge ; abdomen with a hoary band on the hind border of each segment ; legs black ; tibiæ white, black at the base and towards the tips ; wings grey ; veins and stigma black ; fore branch of the cubital vein nearly straight, subanal vein joining the anal at some little distance from the border.

Length of the body 4 lines ; of the wings 8 lines.

Amazon Region.

*Tabanus mallophoroides.*

*Fœm.*—Niger, capite apud oculos albo, callis duobus parvis, antennis cornu elongato arcuato, thorace guttis duabus laterilibus albis, abdomine rufo, fasciis duabus basalibus flavis,

vitta dorsali nigricante, femoribus ciliatis, tibiis ciliatis, alis purpureo-nigricantibus, striga discali lurida, apicibus subcinereis, halteribus fulvis apice albis.

*Female*.—Black, stout, short; head white on each side above and along the eyes; two small shining calli; antennæ with a curved horn, which is nearly as long as the third and following joints together; thorax with a white dot on each side by the base of the wing; abdomen red, with two yellow basal bands, which beneath are united but widely interrupted in the middle, a blackish stripe in the middle above; tibiæ ciliated; femora slightly ciliated; wings blackish, with purple reflections; a lurid streak in each disk; tips hyaline, slightly greyish; halteres tawny, with white tips.

Length of the body 6 lines; of the wings 1½ lines.

Allied to *T. festivus*, Wied.

Amazon Region.

*Tabanus humillimus.*

*Fœm.*—Nigricans, capite cervino subtus cano, callis duobus (postico minimo) fuscis, antennis fulvis parvis simplicibus, callis humeralibus pedibusque fulvis, pectore cano, abdominis segmentis fulvo-marginatis, alis subcinereis, halteribus testaceis.

*Female*.—Blackish; head hoary beneath, fawn colour between the eyes, with a very small brown callus on the vertex and another in front; eyes dark red, all the facets very small; mouth and antennæ tawny, the latter short, slender, simple; humeral calli and legs tawny; pectus hoary; hind borders of the abdominal segments dull tawny; wings greyish; veins black, ferruginous towards the base; fore branch of the cubital vein simple, nearly straight; subanal vein joining the anal at some little distance from the border; halteres testaceous.

Length of the body 4 lines; of the wings 8 lines.

Celebes.

Genus SILVIUS.

*Silvius nitescens.*

*Mas.*—Cinereus, subtus testaceus, antennis fulvis, thorace vittis tribus canis, margine testaceo, abdomine fulvo, maculis trigonis flavo-tomentosis, lituris lateralibus nigricantibus, pedibus fulvis, tarsis piceis, alis subcinereis, halteribus fulvis apice albidis.

*Male*.—Grey, testaceous, and with testaceous hairs beneath; proboscis black, tawny at the base: antennæ tawny; thorax with three hoary stripes, and with testaceous borders; disk of the pectus hoary; abdomen above tawny; hind part with blackish marks on each side, and with triangular spots of shining yellow down; legs tawny; tarsi piceous; wings slightly greyish; veins black, tawny in front and towards the base; halteres tawny, with whitish tips.

Length of the body 5 lines; of the wings 10 lines.

Australia.

#### Fam. 4. ACROCERIDÆ.

With the following exception no accessions to this family have apparently been published since the seventy-four species which are noticed in the British Museum Catalogue.

The genus *Panops* was then hardly known in England. Both sexes of *P. Baudini* are now in Mr. Saunders's collection; the abdomen of the male is almost entirely black, and its antennæ are about twice the length of those of the female.

Dr. Gerstäcker, in his "Beitrag zur Kenntniss der Henopier," Ent. Zeit. Stett. xvii. 339, has described the following new genera and species of this family:—

*Acrocera læta*. Sardinia.

*Eulonchus* (N.G.) *smaragdinus*, California.

*Oenaea lugubris*. Bahia.

#### *Philipota limosa*.

Nigra, capite flavo, vitta interrupta nigra, thorace vittis quatuor, scutello, pectore, segmentorum abdominalium marginibus pedibusque pallidè flavis, scutello macula fusca, femoribus basi nigris, tarsis nigricantibus, alis limpidis.

Black, head pale yellow, with an interrupted black stripe; thorax with four pale yellow stripes; pectus mostly pale yellow; scutellum pale yellow, with a brown discal spot; abdomen with a pale yellow band on the hind border of each segment; legs pale yellow; femora black at the base; fore femora black above for some space from the base; tarsi blackish; wings limpid; veins black, pale yellow at the base; halteres pale yellow.

Length of the body  $2\frac{1}{2}$  lines; of the wings 6 lines.

Valley of the Amazon.

## Fam. 5. ASILIDÆ.

## Sub-fam. 1. MYDASITES.

Fifty-nine species of this sub-family are referred to in the Catalogue, and Macquart has published seven species of *Mydas* and one of *Cephalocera*, in his fourth Supplement.

*Mydas effracta.*

*Fœm.*—Nigra, capite anticè subtusque, antennis basi, thoracis vittis duabus, scutello pedibusque fulvis, abdomine maculis sex luteis, femoribus posticis basi flavis, alis luridis, striga discali fuscescente, arcolarum discis sublimpidis, venis halteribusque fulvis.

*Female.*—Black, thinly clothed with tawny hairs; head tawny in front and beneath; antennæ at the base and proboscis tawny; thorax on each side with a tawny stripe, which is dilated in front about the callus; scutellum tawny; abdomen on each side with three luteous spots, which are obliquely truncated hindward; legs tawny; hind femora yellow at the base; wings lurid, with a brownish discal streak at nearly three-fourths of the length; most of the areolets with nearly limpid discal streaks of various breadth; veins and halteres tawny.

Length of the body 11 lines; of the wings 15 lines.

Anstralia.

*Mydas signata.*

*Mas.*—Atra, capite piceo albo-piloso, thorace maculis duabus anticis vittisque duabus lateralibus interruptis testaceis, abdomine maculis lateralibus trigonis argenteis, pedibus anterioribus piceis, alis albido-limpidis, venis nigris fusco-submarginatis, halteribus ex parte albidis.

*Male.*—Deep black; head thinly clothed with whitish hairs, above piceous, with hoary tomentum on each side; thorax with two testaceous spots in front, and with an interrupted irregular testaceous stripe on each side; abdomen with triangular silvery hoary spots on each side; anterior legs piceous; wings whitish, limpid; veins black, slightly bordered with brown; halteres partly whitish.

Length of the body 10 lines; of the wings 12 lines.

Australia.

This species differs much from the preceding one; the antennæ



are much shorter, and the first cubital areolet has a very much shorter petiole, and rejects a short branch at its base.

Sub-fam. 2. DASYPOGONITES.

The Catalogue contains 411 species of this sub-family, in addition to which Macquart has published twenty-one species in his fourth Supplement, and two new genera, *Codula*, and *Senoxericera*.

Genus DASYPOGON.

*Dasygogon æqualis*.

Ferrugineus, linearis, capite supra nigricante, facie subauratâ, mystace nigro supra pallido-subaurato, antennis nigris basi ferrugineis, thoracis parte anticâ vittaque postica nigris, abdomine basi fasciisque nigris, maculis duabus anticis testaceis, alis cinereis apud costam luridis, venis ferrugineis, halteribus testaceis.

Ferruginous, linear; head blackish between the eyes, slightly gilded in front; mystax composed of short black bristles, above which there are a few pale slightly gilded bristles; proboscis black; antennæ black, nearly as long as the breadth of the head; first and second joints ferruginous; third lanceolate, much longer than the first and the second together; thorax black in front and on the disk, and with a black hind stripe; abdomen linear, almost as broad as the thorax, black at the base, with a testaceous spot on each side of the second segment, and with a black band on each of the following segments; legs slender; wings grey, lurid in front; veins ferruginous; halteres testaceous.

Length of the body  $4\frac{1}{2}$  lines; of the wings 8 lines.

Port Natal.

*Dasygogon suavis*.

*Mas.*—Ferrugineo-rufus, gracilis, capite posticè albo, facie subauratâ, mystace albo, antennis fulvis, articulo 3<sup>o</sup> sublineari supra nigro, thorace vittis tribus canis, femoribus tibiis tarsisque posticis apice nigris, alis luridis, areolarum discis sublimpidis, venis nigris, halteribus testaceis.

*Male.*—Ferruginous-red, slender; head pale, gilded in front with shining white tomentum behind; mystax with a few white bristles; proboscis piceous; antennæ tawny; third joint nearly linear, black above; thorax with three indistinct hoary stripes; legs rather slender; tips of the hind femora, of the hind tibiæ, and

of the hind tarsi, black ; wings lurid ; disks of the areolets nearly limpid ; veins black ; halteres testaceous.

Length of the body 5 lines ; of the wings 8 lines.

Australia.

### Sub-fam. 3. LAPHRITES.

The Catalogue contains 217 species of this sub-family. Macquart has published eight species in his fourth Supplement.

#### *Laphria fortipes.*

Nigra, robusta, capite pilis nigris densè vestito subtus albido-hirto, antennarum articulo 3<sup>o</sup> subclavato, abdomine nitente purpurascente subcupreo, segmentorum marginibus posticis apiceque albo-pubescentibus, pedibus crassis pilosis, femoribus posticis valdè incrassatis, tibiis posticis arcuatis, alis limpidis, venis halteribusque fulvis, illis apice nigris.

Black, stout ; head thickly clothed with long black hairs, and beneath with whitish hairs ; antennæ nearly as long as the breadth of the head ; third joint subclavate, slightly pubescent, a little longer than the first and second joints together ; abdomen shining, with a purplish cupreous tinge, and with white down on the hind border of each segment and at the tip ; legs thick, pilose ; hind femora much incrassated ; hind tibiæ curved ; wings limpid ; veins tawny, black towards the tips, with the usual structure ; halteres tawny.

Length of the body 6 lines ; of the wings 8 lines.

Port Natal.

### Genus LAMPRIA, Mac.

#### *Lampria cilipes.*

*Mas.*—Nigra, capite postico cinereo, mystace fulvo, antennis thorace paullo longioribus, articulo 3<sup>o</sup> longissimo depresso, thorace vittis quatuor subauratis, scapulis fulvis, pectore cinereo, abdomine fulvo, disco fusco, pedibus fulvis, tibiis posticis extus nigris ciliatis, alis cinereis, apud costam nigricantibus, striga basali lurida, halteribus fulvis.

*Male.*—Black ; head behind with cinereous tomentum ; mystax with a few tawny bristles ; antennæ a little longer than the thorax ; third joint linear, depressed, more than twice the length of the first and the second together ; thorax with four indistinct stripes of slightly gilded tomentum ; scapulæ tawny ; pectus cinereous ;

abdomen tawny, disk above brown; legs tawny; hind femora very thick; hind tibiæ black and ciliated exteriorly; wings dark grey, blackish in front, with a lurid streak at the base; halteres tawny.

Length of the body  $3\frac{1}{2}$  lines; of the wings 7 lines.

Amazon Region.

Sub-fam. 4. ASILITES.

The Catalogue contains 654 species of this sub-family. Macquart has published 44 species in his fourth Supplement.

Genus TRUPANEA, Macq.

*Trupanea venerabilis.*

*Mas.*—Cinereo-cervina, capite albo-piloso, fronte argentea, mystace pallidè testaceo, antennis nigris, thorace fasciis nigris, abdomine nigro fasciis cinereis, pedibus ferrugineis, coxis femoribusque nigris, alis subcinereis.

*Male.*—Cinereous-fawn colour; head with white hairs beneath; front silvery white; mystax composed of pale testaceous bristles; proboscis and antennæ black; seta of the latter a little longer than the third joint; thorax with black bands; abdomen black, shining, with a cinereous band on the hind border of each segment; legs ferruginous, with black hairs and spines; coxæ and femora black; wings slightly greyish; veins black, ferruginous at the base.

Length of the body 5 lines; of the wings 9 lines.

Port Natal.

*Trupanea leucopyga.*

*Mas.*—Nigra, testaceo-pilosa, pectore cinereo, abdomine fasciis tribus testaceis, apice albo, tibiis posticis testaceis apice nigris, alis subcinereis, venis nigris, halteribus testaceis.

*Male.*—Black; head and fore part of the thorax with testaceous hairs; hind part of the latter with tawny hairs; pectus cinereous; abdomen with three testaceous bands on the forepart; tip with white hairs; hind tibiæ testaceous, with black tips; wings slightly cinereous; veins black; halteres testaceous.

Length of the body 7—8 lines; of the wings 12—14 lines.

China.

Genus *ASILUS*, Linn.*Asilus sericans.*

*Fœm.*—Cinereus, capite cano, fronte subaurata, mystace albido supra nigro, antennis nigris, thorace vittis quatuor nigris, pectore cano, abdomine nigro oblanceolato, basi lateribusque cinereis, apice compresso nitente, pedibus ferrugineis, coxis femoribusque nigris, alis subluridis.

*Female.*—Cinereous; head hoary; front very slightly gilded; mystax composed of some whitish shining bristles, above which there are a few more slender black bristles; proboscis and antennæ black, seta of the latter longer than the third joint; thorax with four distinct black bands; pectus hoary; abdomen black, oblanceolate, cinereous at the base and along each side; tips compressed, shining; legs ferruginous, with black spines and hairs; coxæ and femora black; wings slightly lurid; veins black.

Length of the body 5 lines; of the wings 8 lines.

Amazon region.

*Asilus firmatus.*

*Fœm.*—Cinereus, capite aurato subtus albido-hirto, mystace nigro supra testaceo, antennis nigris, thorace vittis quatuor nigris abbreviatis, abdomine maculis trigonis fuscescentibus, apice nigro subcompresso, pedibus nigris, femoribus supra tarsisque basi ferrugineis, tibiis fulvis, alis cinereis, areolis posticis luridis cinereo-strigatis, venis nigris, halteribus fulvis.

*Female.*—Cinereous; head with pale gilded tomentum, clothed beneath with whitish hairs; mystax with black hairs towards the antennæ, and with pale testaceous bristles towards the proboscis; antennæ black, arista not longer than the third joint; thorax with four short black stripes; abdomen with a triangular brownish spot on each segment, tip black, slightly compressed; legs black, femora ferruginous above, tibiæ tawny, tarsi ferruginous at the base; wings grey, lurid hindward, with a grey streak on the disk of each areolet; veins black; halteres tawny.

Length of the body 10 lines; of the wings 14 lines.

Port Natal.

*Asilus mendax.*

*Mas.*—Ater, nigro-setosus, capite subtus cano-piloso, facie auratâ, mystace nigro, tibiis tarsisque subtus fulvo-pubescenti-

bus, alis nigricantibus fascia lata basali lactea, halteribus fulvis.

*Male*.—Deep black, with black bristles; head with some hoary hairs beneath; face with bright gilded tomentum, mystax with many black bristles; legs rather thickly clothed with black hairs and bristles, tibiæ and tarsi clothed beneath with bright tawny down; wings blackish, with a broad milk-white band very near the base; halteres tawny.

Length of the body 10 lines; of the wings 16 lines.

Celebes.

*Asilus Shalumus.*

*Fœm.*—Niger, capite mystaceque auratis hâc setis paucis nigris, antennis ferrugineis, thorace fuscescente, lateribus pectoreque auratis, pedibus fulvis, robustis, nigro-setosis, femoribus mediis nigro-spinosis, alis cinereis subluridis, venis ferrugineis, halteribus testaceis.

*Female*.—Black; head gilded; mystax with gilded bristles, with which are some few more slender black bristles; antennæ ferruginous, arista black, almost as long as the preceding part; thorax with brownish tomentum, sides and pectus gilded; legs tawny, stout, with black bristles, middle femora with black spines; wings grey, slightly lurid, veins ferruginous; halteres testaceous.

Length of the body 12 lines; of the wings 20 lines.

China.

Genus LEPTOGASTER, Meigen.

*Leptogaster cingulipes.*

Nigra, capite cano, antennis basi testaceis, thorace fulvo nitente vitta picea, pectore testaceo albido-tomentoso, femoribus et tibiis basi fasciaque tarsisque basi subtus testaceis, alis limpidis apice cinereis, venis nigris, halteribus albidis apice nigricantibus.

Black; head with hoary tomentum; antennæ testaceous at the base; thorax tawny, shining, with a piceous stripe; pectus testaceous, with whitish tomentum; femora and tibiæ testaceous at the base and with a testaceous band, tarsi testaceous towards the base beneath; wings limpid, tips cinereous, veins black; halteres whitish, with blackish knobs.

Length of the body 4 lines; of the wings 6 lines.

Valley of the Amazon.

## Fam. 6. LEPTIDÆ.

This family contains about seventy-six species and eleven genera, of which *Lampromyia* seems to be more nearly allied to the *Bombylidæ*.

## SYNOPSIS OF THE GENERA.

- \* Caput convexum.
- † Proboscis elongata, gracilis, sub corpus recumbens.
- ‡ Palpi breves. *Lampromyia*, Macq.
- ‡ Palpi longi. *Dasypalpus*, Macq.
- †† Proboscis brevis, crassa.
- ‡ Antennarum articulus 4<sup>us</sup> longus.
- § Antennarum articulus 3<sup>us</sup> conicus aut rotundatus.
- × Palpi incumbentis.
- Oculi nudi. *Leptis*, Fabs.
- Oculi villosi. *Dasyomma*, Macq.
- ×× Palpi elevati.
- Abdomen cylindricum, longissimum. *Vermileo*, Macq.
- Abdomen conicum, mediocre.
- ++ Arista mediocris. *Chrysopila*, Macq.
- +++ Arista longissima. *Syneches*, Walk.
- §§ Antennarum articulus 3<sup>us</sup> transversus. *Athorix*, Meig.
- ‡† Antennarum articulus 4<sup>us</sup> brevis.
- § Antennarum articulus 3<sup>us</sup> brevis. *Ptiolina*, Stæg.
- §§ Antennarum articulus 3<sup>us</sup> longus. *Spania*, Meig.
- \*\* Caput planum. *Exeretoneura*, Macq.

## Fam. 7. BOMBYLIDÆ.

## Sub-fam. 1. THEREVITES.

Contains about 115 species and six genera.

## SYNOPSIS.

- \* Proboscis gracilis, elongata. *Xertomyza*, Weid.
- \*\* Proboscis brevis, crassa.
- † Antennarum articulus 3<sup>us</sup> nudus.
- ‡ Antennarum arista vix distincta.
- § Corpus angustum.
- × Proboscis non prominens. *Thereva*, Latr.
- ×× Proboscis prominens. *Anabarhynchus*, Macq.
- §§ Corpus latum, pilosissimum. *Exapata*, Macq.

†† Antennarum arista distincta, triarticulata. *Ruppellia*, Wied.

†† Antennarum articulus 3<sup>us</sup> hirtus. *Chyromyza*, Wied.

*Thereva arida.*

Cinerea, subtus albida, capite callis duabus nigris subrotundis, antennis apud apices nigricantibus, thorace vittis quinque fuscis interruptis, abdomine glaucescente, pedibus fulvis, tarsorum articulis apice nigris, alis subcinereis, apud costam luridis, venis halteribusque fulvis.

Cinereous, whitish beneath; head with two nearly round black shining calli; antennæ blackish towards the tips; thorax with five slender, much interrupted, brownish stripes; abdomen glaucous hoary; legs tawny, joints of the tarsi with black tips, terminal joints wholly black; wings slightly greyish, lurid along the costa; veins and halteres tawny.

Length of the body 4 lines; of the wings 6 lines.

Australia.

*Thereva scutellaris.*

*Mas.*—Nigra, antennis linearibus basi fulvis, thorace vittis duabus pectoreque cinereis, scutello ardentè rufo, abdominis segmentis albo-marginatis, pedibus fulvis, alis limpidis, venis halteribusque testaceis.

*Male.*—Black; antennæ linear, tawny towards the base; thorax with two cinereous stripes; pectus cinereous; scutellum very bright red; abdomen with a white band on the hinder border of each segment; legs tawny; wings limpid, veins and halteres testaceous.

Length of the body  $2\frac{3}{4}$  lines; of the wings 4 lines.

Valley of the Amazon.

Sub-fam. NEMESTRINITES.

Contains about thirty-seven species, and is here divided into four genera, *Trichophthalma* being combined with *Hirmonoura*.

SYNOPSIS.

\* Alæ reticulatæ.

† Caput thorace angustius; proboscis corpore longior. *Mægistorhynchus*, Macq.

†† Caput thoracis latitudine; proboscis corpore non longior, *Nemestrina*, Latr.

\*\* Alæ non reticulatæ.

† Frons lata. *Fallonia*, Meig.

†† Frons sat angusta; oculi hirti; proboscis brevis, aut vix elongata. *Hirmoneura*, Wied.

The genera *Trichopsidea* and *Colax* connect this sub-family and the following one with the *Æstridæ*.

*Trichophthalma lætilinea.*

*Mas et Fœm.*—Nigra, subtus cana, capite thoracisque vittis quatuor canis, abdomine fasciis duabus testaceis, pedibus fulvis, alis vix cinerascentibus, venis fulvis.

*Mas.*—Thoracis abdominisque lateribus cano-pilosis. *Fœm.*—Thoracis lateribus cano-pilosis, abdominis lateribus nigropilosis.

*Male and Female.*—Black; hoary and with hoary hairs beneath; head hoary; thorax with four hoary stripes, and on each side with testaceous hairs in the male, and with hoary hairs in the female; abdomen with two shining testaceous bands, sides with shining testaceous hairs in the male, and with black hairs in the female; legs tawny; wings very slightly greyish, veins tawny.

Length of the body 6—7 lines; of the wings 12—14 lines.

Australia.

*Trichophthalma albibasis.*

*Fusca*, subtus alba, capite albo, antennis nigris basi testaceis, abdomine lurido vitta nigricante, basi lateribusque allopilosis, fasciulis duobus lateralibus nigris, pedibus fulvis, alis cinereis, apud costam fuscis, venis nigris.

Brown, with white tomentum and hairs beneath; head with white tomentum; proboscis black; antennæ black, testaceous at the base; thorax with brownish hairs; abdomen lurid, with a blackish stripe, thickly clothed with white hairs at the base, sides with white hairs, which are interrupted by two small tufts of black hairs; legs tawny; wings grey, brown along most of the length and half the breadth, veins black.

Length of the body 6 lines; of the wings 14 lines.

Australia.

*Trichophthalma primitiva.*

*Cana*, lata, crassa, albido-pilosa, abdomine fasciato, pedibus piceis, alis subcinereis, venis nigris.



Hoary, thick and broad, with whitish hairs which form bands on the abdomen; legs piceous; wings slightly greyish, veins black.

Length of the body 6 lines; of the wings 12 lines.

Australia.

*Trichophthalma bivitta.*

Nigricante fusca, albo-pilosa, subtus alba, capite albo, antennis nigris basi albis, thoracis lateribus testaceo-pilosis, abdomine vittis duabus latis pallidè luteis, pedibus fulvis, alis cinereis apud costam fuscis, venis nigris, halteribus testaceis.

Blackish brown, narrow, with white hairs, underside with white tomentum; head white; proboscis and antennæ black, the latter white at the base; thorax with testaceous hairs along each side; abdomen with a broad pale testaceous stripe on each side; legs tawny; wings grey, brown along the costa, veins black; halteres testaceous.

Length of the body 4 lines; of the wings 8 lines.

Australia.

Sub-fam. 3. ANTHRACITES.

This family contains about 600 named species, and many more have been discovered, but are not yet described.

SYNOPSIS.

- \* Antennæ remotæ; frons lata.
- † Proboscis crassa, brevis, nonnunquam longa.
- ‡ Os clausum; ocelli nulli; proboscis nulla; antennarum articulus 3<sup>us</sup> subglobosus. *Colax*, Weid.
- ‡ Os apertum; proboscis distincta.
- § Alæ venis externo mediis quatuor.
- × Facies convexa; antennarum articulus 3<sup>us</sup> elongatus, subulatus.
- Antennarum articulus 3<sup>us</sup> rectus; pedes elongati. *Exoprosopa*, Macq.
- Antennarum articulus 3<sup>us</sup> divergens; pedes breves. *Tomomyza*, Weid.
- ×× Facies plana, mystacina; antennarum articulus 3<sup>us</sup> brevis. *Spogostylum*, Macq.
- §§ Alæ venis externo mediis tribus. *Anthrax*.
- †† Proboscis gracilis, elongata.
- ‡ Alarum areola 1<sup>a</sup> postica clausa. *Callostoma*, Serv.
- ‡‡ Alarum areola 1<sup>a</sup> postica aperta.

- § Antennarum articulus 3<sup>us</sup> elongatus.  
 × Antennarum articulus 3<sup>us</sup> subuliformis.  
 → Corpus non pilosum. *Mulio*, Latr.  
 →→ Corpus pilosum. *Sericosoma*, Macq.  
 ×× Antennarum articulus 3<sup>us</sup> spatulatus. *Enica*, Macq.  
 §§ Antennarum articulus 3<sup>us</sup> brevis. *Litorhynchus*, Macq.  
 \*\* Antennæ approximatae; frons maris angusta.  
 † Proboscis brevis aut vix elongata.  
 † Alæ areolis tribus submarginalibus. *Neuria*, Newm.  
 † Alæ areolis duabus submarginalibus.  
 § Antennarum articulus 3<sup>us</sup> subulatus.  
 × Facies plana; antennæ consuetè insertæ. *Anisotamia*, Macq.  
 ×× Frons convexa; antennæ inferius insertæ. *Plesiocera*, Macq.  
 §§ Antennarum articulus 3<sup>us</sup> conicus aut rotundatus.  
 × Antennarum articulus 3<sup>us</sup> conicus. *Lomatia*, Curt.  
 ×× Antennarum articulus 3<sup>us</sup> rotundatus. *Ogcodera*, Macq.  
 †† Proboscis gracilis, elongata.  
 † Caput thorace angustius.  
 § Antennarum arista brevis; alæ areolis quatuor posterioribus.  
 × Antennarum articulus 1<sup>us</sup> vix elongatus, 3<sup>us</sup> pyriformis; alæ areolis tribus submarginalibus. *Adelidea*, Macq.  
 ×× Antennarum articulus 1<sup>us</sup> elongatus, 3<sup>us</sup> compressus, plerumque subulatus; alæ areolis duabus submarginalibus.  
 → Antennæ non pilosæ. *Bombylius*, Linn.  
 →→ Antennæ pilosæ. *Acreotrichus*, Macq.  
 §§ Antennarum articulus 1<sup>us</sup> brevissimus; 3<sup>us</sup> fusiformis, elongatus, obtusus; arista distincta nulla; alæ areolis tribus posterioribus. *Usia*, Latr.  
 †† Caput thoracis latitudine.  
 § Alæ areolis quatuor posterioribus.  
 × Alæ areolis tribus submarginalibus.  
 → Antennarum articulus 1<sup>us</sup> crassus; 3<sup>us</sup> pyriformis. *Ploas*, Latr.  
 →→ Antennarum articulus 1<sup>us</sup> sat gracilis; 3<sup>us</sup> conicus. *Cylenia*, Latr.  
 ×× Alæ areolis duabus submarginalibus.  
 → Antennæ capite longiores.  
 ++ Alæ areola una marginali. *Corsomyza*, Wied.  
 +++ Alæ areolis duabus marginalibus. *Eniconcura*, Macq.  
 →→ Antennæ capite breviores.  
 ++ Palpi elongati.  
 ∞ Palpi articulis duobus ultimis æqualibus. *Apatomyza*, Weid.; *Tabuda*, Walk.; *Choristus*, Walk.

- ∞∞ Palporum articulus ultimus tantum elongatus.
  - Palpi nudi, antennarum articulus 3<sup>us</sup> tumidus. *Megapalpus*, Macq.
  - Palpi pilosi, antennarum articulus 3<sup>us</sup> fusiformis. *Dasypalpus*, Macq.
- ++++ Palpi breves.
  - ∞ Antennarum articulus 1<sup>us</sup> elongatus.
    - Antennæ arista distincta nulla. *Amictus*, Wied.
    - Antennæ arista brevi. *Thlipsomyza*, Weid.
  - ∞∞ Antennarum articulus 1<sup>us</sup> brevis.
    - Proboscis arcuata; antennarum articulus 3<sup>us</sup> convexus. *Cyclorhynchus*, Macq.
    - Proboscis recta, antennarum articulus 3<sup>us</sup> fusiformis. *Phthiria*, Meig.; *Parisus*, Walk.
  - §§ Alæ areolis tribus posterioribus.
    - × Abdomen elongatum; pedes postici elongati, coxis incrassatis. *Systropus*, Wied.
    - ×× Abdomen ovatum.
      - Proboscis arcuata; antennæ capite longiores, articulus 1<sup>us</sup> 3<sup>o</sup> longior. *Toxophora*, Weid.
    - Proboscis recta.
      - ++ Antennæ capitis vix longitudine, articulus 1<sup>us</sup> 3<sup>o</sup> brevior. *Geron*, Meig.
  - ++++ Antennæ capite longiores. *Heterostylum*, Macq.
  - +++++ Antennæ capite multo longiores. *Lepidophora*, Westw.

Of these genera *Exoprosopa* (Macq.) or *Trinaria* (Mulsant), *Litorhynchus* (Macq.), and *Neuria* (Newm.) or *Comptosia* (Macq.), were originally combined with *Anthrax*, with which genus they are connected by so many gradations that I have for a while reunited them with it. *Ligyra* (Newm.) is also included in that genus.

The genus *Cyrtosia* (Perris), which is characterized by the wing having no discal areolet, may also be included in this family.

#### GENUS ANTHRAX.

The species being very numerous are here noticed with reference to their geographical distribution. About four hundred have been described.

#### EUROPE.

About seventy species have been recorded, but the number may probably be somewhat reduced. They may be divided into four

groups; a few of them appear also in North Africa and West Asia, one in North America, and one in Hindostan. The group *Exoprosopa*, which comprises most of the species of *Anthrax* in warm regions, appears along the south-east and south borders of Europe.

NORTH AMERICA

Contains about forty described species, which form seven groups.

MEXICO.

Some of the North American species extend to Mexico, besides which it is inhabited by nine species and five groups.

WEST INDIES.

Five groups and fourteen species, two of which also inhabit Brazil, and one is said to have been found in New Guinea.

SOUTH AMERICA.

Ten groups and fifty-five species.

Group 3. DIPT. SAUND. 166.

*Anthrax convexa.*

Picea, capite argenteo, antennis pedibusque nigris, thorace fulvo-piloso, scutelli margine ferrugineo, abdomine fasciis duabus albidis, fasciculis duobus basalibus, apice argentea, femoribus fulvis, alis cinerascensibus, basi costaque fuscis.

Piceous; head silvery; proboscis and antennæ black; thorax with tawny hairs in front and along each side; scutellum with a ferruginous border; abdomen with slight whitish bands, one near the base more distinct than the others, a tuft of white hairs on each side at the base, tip silvery; legs black, femora mostly tawny; wings greyish, brown at the base and along three quarters of the costa.

Length of the body 4 lines; of the wings 10 lines.

Valley of the Amazon.

*Anthrax dorsalis.*

Testacea, thoracis disco nigro, scutello fulvo, abdomine fasciis tribus contiguis nigris, alis dimidio basali fusco testacco-notato incisuris quatuor.

Testaceous; disk of the thorax black; scutellum tawny; abdomen with three short contiguous black bands; wings brown,

with some testaceous marks on more than half the surface from the base, the brown part extending for three quarters of the length of the costa to near the tip of the interior border, its outline with four indentations.

Length of the body  $33\frac{1}{2}$  lines ; of the wings 7—8 lines.  
Valley of Amazon.

Group 6. DIPT. SAUND. 166.

*Anthrax decemmacula.*

Nigricans, testaceo-hirta, capite postico sordidè albido, abdominis lateribus obscurè fulvis, pedibus fulvis, alis subcinereis fusco-decemmaculatis, basi costâque subfuscis.

Blackish ; head dingy, whitish behind ; thorax and abdomen with short pale testaceous hairs and with rather longer hairs on each side ; abdomen dull, tawny on each side ; legs tawny ; wings slightly greyish, brownish at the base and along most of the length of the costa, and with ten darker brown dots, which are on the transverse veins or on the curves and angles of the other veins.

Length of the body  $2-3\frac{1}{2}$  lines ; of the wings, 5—8 lines.  
Valley of the Amazon.

*Anthrax conclusa.*

Mas.—Nigricans, fulvo-pubescent, abdominis lateribus basi fulvis, apice argenteo, pedibus fulvis, tarsis nigris, alis limpidis, basi perobliquè fuscis.

Male.—Blackish, with dull tawny pubescence ; proboscis and antennæ black, the former a little longer than the head ; sides of the abdomen tawny towards the base, tip with silvery pubescence ; legs tawny, tarsi black ; wings limped, brown towards the base, outline of the brown part very oblique, extending from full three quarters of the length of the costa to the middle of the interior border, and is contiguous to three black spots ; veins black ; halteres testaceous.

Length of the body  $4\frac{1}{2}$  lines ; of the wings 10 lines.  
Valley of the Amazon.

Like Group 5, DIPT. SAUND. 166, but with the hind legs ciliated.

*Anthrax lurida.*

Nigricante picea, ex parte ferruginea, nigro-hirta, pedibus anterioribus fulvis, posticis nigro dense ciliatis, alis luridis.

Blackish piceous, partly ferruginous, with black hairs ; anterior legs tawny ; hind legs thickly and deeply fringed with black hairs ; wings lurid ; veins of the same colour.

Length of the body 6 lines ; of the wings 14 lines.

Valley of the Amazon.

Group 10. DIPT. SAUND. 167.

*Anthrax lineata.*

Nigra, thoracis lateribus testaceo-pilosis, abdomine fasciis quatuor pallide auratis, apice albo, alis limpidis, basi strigaeque subcostali fuscis.

Black ; thorax with testaceous hairs along each side ; abdomen with four pale gilded bands, first band near the base, second beyond the middle, hardly interrupted ; third and fourth slight, sub-apical, tip with white hairs ; wings limpid, brown at the base, and with a brown subcostal streak.

Length of the body 3 lines ; of the wings 7 lines.

Valley of the Amazon.

*Anthrax solita.*

Nigra, capite argenteo, thoracis lateribus fulvo-pubescentibus, abdominis segmentis tomento fulvo marginatis, alis limpidis, basi costaque interiore fuscis, venis nigris, halteribus testaceis.

Black ; head silvery ; thorax with tawny pubescence on the borders, and on the margin of the scutellum ; hind borders of the abdominal segments with tawny tomentum ; wings limpid, brown at the base and along a short space of the costa ; veins black ; halteres testaceous.

Length of the body  $3\frac{1}{2}$  lines ; of the wings 8 lines.

Valley of the Amazon.

Group 14. DIPT. SAUND. 168.

*Anthrax inexacta.*

Nigra, angusta, pedibus gracilibus, alis longiusculis sat angustis, bistriente basali oblique nigro-fusca, extus subcinerascens.

Black, narrow ; legs slender ; wings rather long and narrow, blackish brown on nearly two-thirds of the surface, the outline of the brown part extending from seven-eighths of the length of

the costa to the end of the interior border ; exterior part slightly greyish.

Length of the body 3 lines ; of the wings 8 lines.

Valley of the Amazon.

*Anthrax angustipennis?*

Nigra, abdomine fasciculis duobus basalibus albis, apice argentea, alis vitreis longis angustis, vittâ costali nigrâ attenuatâ, incisuris quatuor.

*Anthrax angustipennis?* Macq. Dipt. Exot. ii. p. 64, 26, Pl. 21, fig. 9.

Black, narrow ; abdomen with a white tuft on each side at the base ; apical third part silvery white ; wings vitreous, long and narrow, black along the costa, the black part successively decreasing in breadth from the base, with four indentations on its hind side.

Length of the body 3—3½ lines ; of the wings 8—9 lines.

Valley of the Amazon.

GALAPAGOS.

One species.

CANARY ISLES.

Three species and two groups.

AFRICA.

Seven groups and seventy species.

Group 3. DIPT. SAUND. 166.

*Anthrax commiles.*

Nigra, thoracis lateribus fulvo-pilosis, scutello ferrugineo, abdominis lateribus basi ferrugineo-pilosis apice nigro-pilosis, maculis quatuor lateralibus, ventre basi fulvo, alis sublimpidis, basi costâque fuscis.

Black ; thorax with tawny hairs on each side ; scutellum ferruginous, except at the base ; abdomen with ferruginous hairs on each side at the base, and with black hairs towards the tip, two white lateral spots at about half the length, and two sub-apical, underside tawny towards the base ; wings nearly limpid, dark brown on the whole breadth towards the base, and for more than three-fourths of the length along the costa ; the outline of the brown part clearly defined and almost straight.

Length of the body 4½ lines ; of the wings 11 lines.

Port Natal.

*Anthrax argentilatus.*

Nigra, thoracis marginibus fulvo-pilosis, abdomine fulvo, lateribus argenteo-tomentosis, alis basi costâque fuscis.

Black; thorax with tawny hairs in front and along each side; abdomen tawny, with silvery tomentum along each side, except at the base and towards the tip; wings wholly brown for near one-fourth of the length from the base, and brown along the costa for three-fourths of the length; the outline of the brown part very oblique and slightly concave.

Length of the body 4 lines; of the wings 10 lines.

Port Natal.

MADAGASCAR.

Two groups and three species.

ISLE OF FRANCE.

One group and two species.

DESERTS OF TARTARY, AND SOUTHERN COASTS OF THE CASPIAN SEA.

One group and five species.

PERSIA.

One group and two species.

ARABIA AND MESOPOTAMIA.

(Exclusive of several species inhabiting the borders of the Red Sea, and described in Klug's "Symbolæ Physicæ.")

Three groups and six species.

SOUTH ASIA.

Seven groups and forty-three species.

The largest species of this region much resemble those of South America, but those of Australia, as is usual in other genera, are very different in structure.

Group 7. DIPT. SAUND. 165.

*Anthrax latifascia.*

Nigra, thoracis margine antico lateribusque fulvo-pilosis, abdomine fasciâ latâ subauratâ, apice argenteo, alis subcinereis, basi costâque fuscis.



Black ; thorax with tawny hairs in front and along each side ; abdomen with a broad pale gilded band ; tip silvery ; wings slightly greyish, wholly brown at the base, and brown along the costa for five-sixths of the length ; the outline of the brown nearly straight, but rather undefined.

Length of the body 3 lines ; of the wings 8 lines.

China.

*Anthrax combinata.*

Nigra, capite subaurato, thoracis marginibus fulvo-pilosis, scutello piceo, abdominis lateribus nigro-pilosis, fasciculis duobus basalibus testaceis, fasciâ albidâ subauratâ media, apice argenteo, alis subcinereis, triente basali costâque fuscis.

Black ; head with pale and slightly gilded tomentum in front and beneath ; thorax with tawny hairs in front and along each side ; scutellum piceous ; abdomen with black hairs along each side, with a tuft of testaceous hairs on each side at the base, and with a whitish slightly gilded band across the middle ; tip silvery ; wings slightly greyish, brown for one-third of the length from the base, and for five-sixths of the length along the costa ; outline of the brown part nearly straight, but somewhat undefined.

Length of the body 5 lines ; of the wings 12 lines.

China.

AUSTRALIA.

Eleven groups and about fifty species.

Group 3. DIPT. SAUND. 166.

*Anthrax albirufa.*

Nigra, thoracis lateribus pectoreque pilis rufescentibus, pectore fascia interrupta alba, abdomine pilis basalibus, fascia interrupta apice ventre que albis, lateribus nigro-pilosis, alis subcinereis apud costam nigro-fuscis.

Black ; thorax with reddish hairs on each side and in front ; pectus with reddish hairs, which are interrupted by a white band ; abdomen with white hairs at the base, with an interrupted white band hindward, and with a white tip ; sides with black hairs ; underside with a white disk ; wings slightly greyish, blackish brown along the costa for half the breadth and three-fourths of the length ; hind border of the brown part dilated at the base and in the middle.

Length of the body 6 lines ; of the wings 12 lines.

Australia.

Group 8. DIPT. SAUND. 167. NEURIA, Newm.

*Anthrax subsenex.*

Nigra, sat angusta, subtus cana, capitis lateribus subtus fulvo-tomentosis, abdominis lateribus basi cano-pilosis, pedibus fulvis, tibiis posticis tarsisque nigris, alis cinereis longis angustis, basi costâque fuscis, venis nigris, halteribus testaceis apice fuscescentibus.

Black, rather narrow, hoary beneath; head with tawny tomentum on each side beneath; abdomen thickly clothed with hoary hairs on each side at the base; legs tawny; tarsi and hind tibiæ black; wings grey, long, narrow, brown at the base and along three quarters of the length of the costa; veins black; halteres testaceous, with brownish tips.

Length of the body 7 lines; of the wings 14 lines.

Australia.

Group 10. DIPT. SAUND. 167.

*Anthrax sobricula.*

Nigra, sat angusta, fulvo-pilosa, capite subtus pectoreque albido-pubescentibus, alis subcinereis, basi costâque fuscis.

Black, rather narrow, clothed above with tawny hairs, which have whitish reflections; head on each side beneath and pectus with whitish down; head small, much narrower than the thorax; wings greyish, brown at the base and along the costa for two-thirds of the length.

Length of the body  $3\frac{1}{2}$  lines; of the wings 8 lines.

Australia.

COUNTRY UNKNOWN.

Eight groups and thirty species.

Genus LOMATIA, Curtis.

*Lomatia fasciolaris.*

Nigra, capite corporisque lateribus fulvo-pilosis, alis albidis, fasciis duabus incompletis fuscis, marginibus subcinereis, costâ fuscâ ex parte ferrugineâ, halteribus testaceis.

Black; head and sides of the body clothed with pale tawny hairs; wings whitish, greyish about the borders, brown and

partly ferruginous along the costa, and with two brown incomplete bands, the exterior one much broader than the other; halteres testaceous.

Length of the body  $4\frac{1}{2}$  lines; of the wings 12 lines.

Port Natal.

In Mr. Saunders's collection.

Genus BOMBYLIUS, Linn.

*Bombylius areolatus.*

Fuscus, subtus fulvus, capite apud antennis ferrugineo subtus cano, antennis nigris, thorace vittis duabus albis, scutello ferrugineo, abdomine vittis tribus argenteis, lateribus nigropilosis, pedibus halteribusque fulvis, alis subcinereis, basi costaque fuscis.

Brown, and clothed with brown hairs, tawny beneath; head ferruginous about the base of the antennæ, hoary beneath: proboscis and antennæ black; thorax with a stripe of white hairs on each side; scutellum ferruginous; abdomen with three stripes of silvery white down, and with long lateral and apical black hairs; legs and halteres tawny; wings greyish, brown at the base and along the costa till near the tips; the outline of the brown rather irregular; veins black.

Length of the body  $3\frac{1}{2}$  lines; of the wings 9 lines.

Australia.

Genus LEPIDOPHORA, Westw.

*Lepidophora vetusta.*

Mas.—Nigra, capite thoraceque cinereo-tomentosis nigrosetosis, scutello thoracisque lateribus ferrugineis, abdominis apice densè plumoso, femoribus ex parte ferrugineis, alis nigris, apice margineque postico limpidis, halteribus apice albis.

Male—Black; head and thorax with cinereous tomentum, and with short black bristles; scutellum and borders of the thorax ferruginous; tip of the abdomen thickly plumed; femora partly ferruginous; wings black, limpid at the tips and along the hind border; halteres with white tips.

Length of the body 8 lines; of the wings 12 lines.

Valley of the Amazon.

*Lepidophora secutor.*

Mas.—Nigra, pectore cinereo-tomentoso, abdominis apice plumoso, alis nigricantibus apice cinereis.

*Male*.—Black; pectus with dark cinereous tomentum; abdomen with black apical plumes; wings blackish, grey and hyaline towards the tips.

Length of the body 6 lines; of the wings 10 lines.

Valley of the Amazon.

GENUS PHTHIRIA, Meig.

*Phthiria lurida*.

Nigro-fusca, capite antico fulvo, thorace fulvo-hirto, scutello fulvo, abdomine fasciis tribus anterioribus latis interruptis fulvis, alis subcinereis, basi costâque luridis, halteribus apice albis.

Blackish brown; head tawny in front; proboscis and antennæ black, the former hardly longer than the thorax; thorax with short tawny hairs; scutellum tawny; abdomen with three broad anterior interrupted tawny bands; hairs short, black; legs black; wings greyish, with a lurid tinge at the base, and along most of the length of the costa; halteres with white knobs.

Length of the body 3 lines; of the wings 8 lines.

Para.

*Phthiria lineifera*.

Nigra, subtus cano-hirta, capite, thorace, scutello segmentisque abdominalibus testaceo-marginatis, pedibus fulvis, alis cinereis, costa fuscescente, venis nigris, halteribus testaceis.

Black, with hoary hairs beneath; head with a testaceous line about the eyes; thorax and scutellum with a testaceous border; hind borders of the abdominal segments testaceous; legs tawny; wings grey, brownish along the costa for three-quarters of the length; veins black; halteres testaceous.

Length of the body 2 lines; of the wings 4 lines.

Australia.

GENUS GERON, Meig.

*Geron albidum*.

Nigrum, albido-pilosum, pedibus albido-tomentosis, alis limpidis, venis halteribusque albis.

Black, rather thickly clothed with whitish hairs; legs with whitish tomentum; wings limpid; veins and halteres white.

Length of the body  $2\frac{1}{2}$  lines; of the wings 5 lines.

Valley of the Amazon.

*Geron? tenue.*

*Mas.*—Nigrum, gracile, proboscide arcuato, antennarum articulo 3<sup>o</sup> lanceolato, pedibus fulvis, tarsis nigris, alis subcinereis, venis nigris, halteribus fulvis.

*Male.*—Black, slender; proboscis curved, more than half the length of the body; third joint of the antennæ lanceolate; legs tawny, rather long and slender; tarsi black; wings greyish; veins black; halteres tawny.

Length of the body  $2\frac{1}{2}$  lines; of the wings 5 lines.

Country unknown.

Fam. 8. SCENOPINIDÆ.

Two or three European and one African species are all that are yet known of the *Scenopinidæ*.

Fam. 9. EMPIDÆ.

This family is, as yet, not much known beyond Europe, where the species are about 400 in number, while in the rest of the world hardly more than thirty have been recorded. The genera are all European, with the exception of the *Eriogaster*, Macq., *Aplomera*, Macq., and *Niconia*, Walk. The type of the latter is *Empis penthophora*, Wied.

Genus EMPIS, Linn.

*Empis reciproca.*

*Fam.*—Cana, proboscide fulvo apice nigro, antennis nigris, thorace vittis tribus cinereis, abdominis apice sub-compresso sub-attenuato, pedibus fulvis pilosis, alis cinereis.

*Female.*—Hoary; proboscis tawny, black at the tip; antennæ black; thorax with three dark cinereous stripes; abdomen slightly attenuated and compressed towards the tip; legs tawny, pilose; wings grey, veins black, testaceous at the base; halteres testaceous.

Length of the body 2 lines; of the wings 4 lines.

United States.

Genus HILARA, Meig.

*Hilara plebeia*.

*Fæm.*—Nigra, pedibus anticis ferrugineis, alis limpidis, venis stigmatæque nigris, halteribus fulvis.

*Female.*—Black; four legs ferruginous; wings limped, veins and stigma black; halteres tawny.

Length of the body  $1\frac{1}{4}$  line; of the wings 3 lines.

United States.

Genus RHAMPHOMYIA, Hoffmanssegg.

*Rhamphomyia expulsa*.

*Mas.*—Nigra, alis cinereis, venis nigris.

*Male.*—Black; hind legs a little longer and stouter than the others; wings grey, veins black.

Length of body  $1\frac{1}{2}$  line; of the wings 3 lines.

United States.

*Rhamphomyia tristis*.

*Fæm.*—Nigra, thorace cinereo vittis duabus nigris, alis limpidis, venis nigris, halteribus albis.

*Female.*—Black; thorax with cinereous tomentum, which is interrupted by two black stripes; wings limpid, veins black; halteres white.

Length of the body 2 lines; of the wings 4 lines.

United States.

Genus PLATYPALPUS, Macq.

*Platypalpus vicarius*.

*Fæm.*—Niger, nitens, pedibus testaceis gracilibus subæqualibus, alis limpidis, venis testaceis.

*Female.*—Black, shining; legs testaceous, slender, nearly equal in size; wings limpid, veins testaceous, externo-medial veins very slightly curved.

Length of the body 1 line; of the wings 3 lines.

United States.

Genus TACHYDROMIA, Fabr.

*Tachydromia postica.*

Nigra, antennis, abdomine basi subtus pedibusque testaceis, femoribus tibiisque posticis piceis, alis cinereis, venis nigris, halteribus albidis.

Black; antennæ, abdomen at the base beneath and legs testaceous; hind femora and hind tibiæ piceous; wings cinereous, veins black; halteres whitish.

Length of the body  $1\frac{1}{2}$  lines; of the wings 3 lines.

United States.

*Tachydromia vittipennis.*

Nigra, antennis pedibusque testaceis, alis cinereis apud margines obscurioribus, halteribus albidis.

Black; antennæ and legs testaceous; wings grey, darker along the borders of the veins; halteres whitish.

Length of the body 2 lines; of the wings 4 lines.

United States.

Fam. 10. DOLICHOPIDÆ.

The European species of this family are from 150 to 200 in number, and the exotic species, which contain no genera different from those of Europe, may amount to 100 or 150.

Genus PSILOPUS, Megerle.

*Psilopus unguivena.*

*Mas.*—Læte viridis, antennis nigris thorace longioribus, thorace subcyanescente, abdomine subaurato, pedibus testaceis, alis subcinereis, venis nigris.

*Male.*—Bright green; antennæ black, much longer than the thorax; thorax slightly bluish; abdomen somewhat gilded; legs testaceous, long, slender; wings greyish, veins black, fore-branch of the præbrachial veins very much bent, nearly rectangular; discal transverse vein very deeply undulating.

Length of the body  $4\frac{1}{2}$  lines; of the wings 7 lines.

United States.

Genus DOLICHOPUS, Latr.

Of this genus Mr. Saunders's collection contains a few apparently undescribed North American species, but it is difficult to ascertain their characters on account of the manner in which they are set.

Fam. 11. LONCHOPTERIDÆ.

Fam. 12. PLATYPEZIDÆ.

The European species of these families may amount to about thirty. No exotic species have yet been discovered.

Fam. 13. PIPUNCULIDÆ.

About twenty European species. One from North America has been described, and another occurs in Australia.

Genus PIPUNCULUS, Latr.

*Pipunculus translatus.*

*Mas.*—Niger, nitens, capite antico argenteo, genubus tarsisque, alis limpidis, venis nigris.

*Male.* Black, shining; head silvery in front; knees and tarsi tawny; wings limpid, veins black.

Length of the body  $1\frac{1}{2}$  line; of the wings 2 lines.  
United States.

Fam. 14. SYRPHIDÆ.

The species of *Syrphidæ* may be about 1000 in number, and as a synopsis of all the genera would be unsuitable here, a list of those which do not occur in Europe is subjoined:—

NORTH AMERICA.

*Chymophila*, Serville; *Ceratophya*, Wied.; *Sphecomyia*, Latr.; *Mixtemyia*, Macq.; *Plagiocera*, Macq.; *Imatisma*, Macq.; *Ocyptamus*, Macq.; *Somula*, Macq.; *Polydonta*, Macq.

SOUTH AMERICA.

*Mixogaster*, Macq.; *Dolichogyna*, Macq.; *Senogaster*, Macq.; *Copestylum*, Macq.



AFRICA.

*Platynochætus*, Wied. (also occurs in Sicily); *Senaspis*, Macq.

ASIA.

*Megaspis*, Macq.; *Priomerus*, Serv.; *Asarkina*, Serville; *Grapto-myza*, Wied.; *Dolichoremus*, Macq. (Type, *Eristalis crassus*, Fabr.)

AUSTRALIA.

*Orthoprosopa*, Macq.; *Coiloprosopa*, Macq.; *Hemilampa*, Macq.

NEW ZEALAND.

*Plesia*, Macq.

Genus CERATOPHYA, Wied.

The two following species differ much in colour and size from the two described by Wiedemann.

*Ceratophya luridescens*.

*Fœm.*—Piceo, thorace pectoreque aurato-fasciatis, abdomine maculis duabus lateralibus basalibus fulvis, tarsis subtus fulvis subauratis, alis luridis cinereo-marginatis, halteribus testaceis.

*Female.*—Piceous; head with whitish tomentum on each side in front; third joint of the antennæ nearly twice the length of the first; thorax and pectus with a slender gilded band; abdomen with an elongated tawny spot on each side at the base; tarsi tawny and slightly gilded beneath; wings lurid, grey along the hind border and at the tips; halteres testaceous.

Length of the body 6 lines; of the wings 11 lines.

Valley of the Amazon.

*Ceratophya bicolor*.

*Mas.* Picea, abdomine, femoribus tibiisque posticis ferrugineo-rufis, alis nigricantibus cinereo-marginatis.

*Male.*—Piceous, like the preceding species in structure; head with testaceous tomentum on each side in front; abdomen, hind femora and hind tibiæ ferruginous red; wings blackish, dark grey at the tips and along the hind border.

Length of the body  $5\frac{1}{2}$  lines; of the wings 11 lines.

Para.

Genus CERIA, Fabr.

*Ceria divisa.*

Nigra, segmentorum abdominalium marginibus posticis flavis, pedibus ferrugineis, femoribus nigricantibus, alis cinereis apud costam nigricante-trimaculatis.

Black; hind borders of the abdominal segments yellow; legs ferruginous, hind femora blackish; wings grey, with three blackish costal spots, the third apical and larger than the others.

Length of the body 4 lines; of the wings 7 lines.

Port Natal,

Genus MICRODON, Meig.

*Microdon testaceus.*

Ferrugineus, capite supra nigricante-cæruleo, tibiis albidis, supra apice tarsisque nigris, alis subcinereis.

Ferruginous, clothed with short hairs; head above blackish blue; scutellum bidentate; tibiæ whitish, black above towards the tips, tarsi black; wings greyish, veins black, ferruginous towards the base.

Length of the body 5 lines; of the wings 10 lines.

Port Natal.

Genus HELOPHILUS, Meig.

*Helophilus strenuus.*

*Mas.*—Niger, thorace vittis quatuor testaceis, scutello luteo, pectore cinereo, abdomine luteo fasciis vittaque interrupta cyaneo-nigris, femoribus posterioribus incrassatis, alis subcinereis.

*Male.*—Black; head with white tomentum in front; thorax with four testaceous stripes; scutellum luteous; pectus cinereous; abdomen luteous, with a bluish black interrupted stripe, and a bluish black band on the hind border of each segment; posterior femora very thick, with cinereous hairs; wings greyish, veins black, ferruginous at the base.

Length of the body 9 lines; of the wings 14 lines.

*Helophilus scitus.*

*Fæm.*—Niger, capite ferrugineo, peristomatis lateribus albis nigro-notatis, thorace vittis fasciisque tribus luteis, scutello

fulvo, pectore aurato, abdomine maculis duabus basalibus lateralibus trigonis luteis, pedibus fulvis, femoribus flavis, anticis nigro-notatis, alis subcinereis, apud costam fuscis, halteribus flavis.

*Female*.—Black; head ferruginous, with pale gilded tomentum about the eyes, white with a black shining mark on each side of the peristoma; thorax with three imperfect luteous stripes and as many luteous bands; scutellum tawny; pectus gilded; abdomen with a triangular luteous spot on each side at the base; fore borders of the segments with testaceous tomentum; legs tawny, femora mostly pale yellow, fore femora with a black dot on each at the base; wings greyish, brown along the costa, veins black; halteres pale yellow.

Length of the body 6 lines; of the wings 11 lines.

Valley of the Amazon.

*Helophilus auratus.*

*Mas*.—Niger, aureo-pubescent, abdomine æneo, alis subcinereis, apud costam nigris.

*Male*.—Black, covered with gilded down, which is brightest on the vertex; abdomen æneous; wings greyish, brown in front, veins black.

Length of the body  $4\frac{1}{2}$  lines; of the wings 7 lines.

Valley of the Amazon.

Genus MERODON, Latr.

*Merodon torpidus.*

Niger, capite antico-albo, antennis fulvis, abdomine fasciis interruptis cano-tomentosis, alis obscurè cinereis.

Black; head white in front; antennæ tawny; abdomen with an interrupted band of hoary tomentum on the fore border of each segment; wings dark grey, veins black.

Length of the body 6 lines; of the wings 9 lines.

Genus SYRITTA, St. Farg. et Serv.

*Syrilla transversa.*

*Mas*.—Nigra, capite aurato, antennis ferrugineis, thorace fasciis duabus anterioribus transversis interruptis maculaque trans-

versa auratis, abdomine æneo, maculis duabus basalibus lateralibus testaceis, pedibus ferrugineis, femoribus posticis crassis denticulatis, alis cinereis, venis nebulosis, halteribus testaceis.

*Male*.—Black; head with pale gilded tomentum, face with a bluish black callus; antennæ ferruginous; thorax with two anterior interrupted bands of gilded tomentum, and with a transverse spot of the same in front of the scutellum; abdomen æneous, with an elongated testaceous spot on each side at the base; legs ferruginous, hind femora thick, minutely denticulated beneath; wings grey, clouded about the veins, which are black; halteres testaceous.

Length of the body 4 lines; of the wings 7 lines.

Valley of the Amazon.

#### Genus TEMNOCERA, St. Farg.

##### *Temnocera trifascia*.

Fulva, abdomine fasciis tribus nigris, 3<sup>a</sup> interrupta apicali, tibiis tarsisque ferrugineis, alis subcinereis apud costam subluridis, stigmatum maculaque costali subapicali nigricantibus.

Tawny; abdomen with three black bands on the hind borders of the segments, third band interrupted, apical; tibiæ and tarsi ferruginous; wings very slightly greyish, slightly lurid along the costa, stigma and a costal subapical spot blackish, veins black.

Length of the body 5 lines; of the wings 8 lines.

Para.

##### *Temnocera circumdata*.

Testacea, antennis luteis, thoracis disco purpureo cupreo, abdomine fasciis tribus latis trijunctis nigris, pedibus nigris, femoribus ferrugineis basi nigris, alis subcinereis, halteribus niveis.

Testaceous; antennæ luteous; disk of the thorax purplish cupreous; disk of the pectus black; abdomen with three broad black bands, which are connected in the middle and on each side; legs black, coxæ tawny, femora ferruginous, black towards the base; wings greyish, veins black, tawny at the base; halteres snow white.

Length of the body 3½ lines; of the wings 8 lines.

Valley of the Amazon.

*Temnocera integra.*

Pallide fulva, abdomine guttis duabus lateralibus subapicalibus nigris, tibiis tarsisque supra ferrugineis, alis limpidis, guttâ apud stigma nigrâ.

Pale tawny; abdomen with two black dots on each side towards the tip; tibiæ and tarsi ferruginous above; wings limpid, stigma testaceous, with a black dot at the base, veins black, testaceous at the base and along the costa.

Length of the body  $3\frac{1}{2}$  lines; of the wings 6 lines.

Valley of the Amazon.

Genus LYCASTRIS, n. g.

Epistoma porrectum, lanceolatum, thorace vix brevius; os corpore vix brevius; antennæ petiolo insertæ; articuli 1<sup>us</sup> et 2<sup>us</sup> breves, 3<sup>us</sup> latus, subellipticus, arista nuda; thorax et abdomen pilosa; pedes simplices; alæ venâ transversâ præbrachiali longâ, arcuatâ, perobliquâ.

Epistoma prolonged into a porrect lanceolate horn, which is nearly as long as the thorax; mouth nearly as long as the body; antennæ seated on a short porrect horn, first and second joints short, third broad, nearly elliptical; arista bare; thorax and abdomen pilose; legs simple; transverse præbrachial vein long, curved, very oblique, placed beyond the middle of the discal areolet; transverse vein between the cubital and the præbrachial ending at the tip of the former.

*Lycastris albipes.*

Testacea, capite piceo, abdomine cyaneo piceo, segmentorum marginibus posticis albido-pilosis, pedibus albis piceo-fasciatis, alis vix subcinereis, venis transversis subnebulosis, halteribus apice piceis.

Testaceous; head piceous, with testaceous tomentum about the eyes; pectus hoary; abdomen bluish piceous, with a band of whitish hairs on the hind border of each segment; legs white; anterior femora at the base, hind femora excepting the tips, tips of anterior tarsi and of hind tibiæ and hind tarsi, piceous; wings very slightly greyish; transverse veins slightly clouded; veins black, testaceous towards the base; halteres with piceous tips.

Length of the body  $5\frac{1}{2}$  lines; of the wings 11 lines.

Hindustan.

Genus *PIPIZA*, Fallen.*Pipiza Pica.*

*Fcem.*—Nigra, nitens, oculis tomento albo marginatis, thoracis guttis quatuor lateralibus scutellique margine fulvis, abdomine subpiceo, femoribus basi piceis, tarsis albis apice piceis, alis limpidis, basi strigâ contiguâ costali fasciâque abbreviatâ nigris, halteribus fulvis.

*Female.*—Black, shining; head with white tomentum about the eyes; face somewhat lurid in the middle; thorax with two tawny dots on each side; scutellum with a tawny border; pectus hoary; abdomen slightly piceous; femora piceous towards the base; tarsi white, with piceous tips; wings limpid, black at the base and with an adjoining black costal streak which joins a black band, the latter is obsolete towards the hind border; halteres tawny.

Length of the body 4 lines; of the wings 7 lines.

Valley of the Amazon.

*Pipiza divisa.*

*Fcem.*—Nigra, pectore cano, abdomine vittis duabus lateralibus ferrugineis, pedibus piceis, femoribus basi, genibus tarsisque subtus ferrugineis, alis limpidis, dimidio basali nigricante posticè cinereo, halteribus fulvis.

*Female.*—Black; pectus hoary; abdomen with a ferruginous stripe along each side; legs piceous; femora at the base, knees and tarsi beneath ferruginous; wings limpid, basal half blackish, excepting the hind border, which is grey; alulæ white; halteres tawny.

Length of the body  $3\frac{1}{2}$  lines; of the wings 6 lines.

Vera Cruz.

*Pipiza dolosa.*

*Mas.*—Nigra, pectore cinereo, abdomine nigro purpureo, alis subcinereis dimidio basali antice nigricante, halteribus fulvis.

*Male.*—Black; pectus cinereous; abdomen blackish purple; legs piceous; wings greyish, blackish along half the length from the base, except towards the hind border; alulæ white; halteres tawny.

Length of the body 3 lines; of the wings 6 lines.

Valley of the Amazon.

Genus SYRPHUS, Fabr.

*Syrphus subchalybeus.*

Fulvus, capite antico glauco, thorace vittis duabus æneis lineisque duabus intermediis fulvis, tibiis posticis piceis, alis cinereis, dimidio basali antice lurido.

Tawny; head glaucescent in front; thorax with two æneous stripes, each of which is intersected by two tawny lines; hind tibiæ piceous; wings grey; basal half, excepting the hind border, lurid; veins ferruginous.

Length of the body 5 lines; of the wings 10 lines.

Valley of the Amazon.

Genus RHOGA, n. g.

*Mas.*—*Parago* affinis, caput sat angustum, oculi supra non connexi; antennarum articulus 1<sup>us</sup> longus; 3<sup>us</sup> brevior, subclavatus; arista nuda; abdomen sessile oblanceolatum, thorace vix duplo longius; tibiæ posticæ subdilatatæ, subciliatæ; metatarsi postici dilatati.

*Male.*—Body rather narrow; eyes parted above; first joint of the antennæ much longer than the third, which is subclavate; arista bare; abdomen sessile, oblanceolate, hardly twice the length of the thorax; hind tibiæ slightly dilated and ciliated; hind metatarsus dilated; wings with the veins much like those of *Paragus* in structure; transverse præbrachial vein placed much before the middle of the discal areolet; transverse præbrachial vein rejecting a branch towards the base of the wing.

*Rhoga lutescens.*

*Mas.*—Pallide lutea, thoracis disco nigro, tibiis posticis extus nigro-pilosis, alis limpidis, fascia apiceque subcinereis.

*Male.*—Pale luteous; head with a black callus on the vertex, and another above the base of the antennæ; thorax with a large black radiating spot on the disk; hind tibiæ with black hairs on the outer side; wings limpid, greyish in the middle and at the tips; veins pale luteous, black in the grey part; halteres testaceous.

Length of the body  $2\frac{1}{2}$  lines; of the wings 5 lines.

Para.

## Fam. 15. CONOPIDÆ.

The *Conopidæ* are probably about fifty in number, and are nearly all contained in the genus *Conops*, which Rondani has divided into several ; the latter may be considered as sub-genera. Macquart has established the following more distinct genus :—

- \* Antennæ on the sides of the porrect front. *Pleurocerina*, Macq.
- \*\* Antennæ at the tip of the porrect front. *Conops*.

XV. *On the Oriental Species of Butterflies related to the Genus Morpho.* By J. O. WESTWOOD, Esq., F.L.S. &c.

[Read March 3rd, 1856.]

THE beautiful insects which form the subject of the present communication are the eastern representatives of a group of butterflies of large size, which, with these oriental exceptions, are exclusive natives of the new world, and which in respect to their size may be ranked amongst the largest known species of butterflies, and in the brilliancy of the colours of many of the species and the grandly ocellated markings of their wings, may equally vie in beauty with any of their rivals. *Morpho Cypris* is in fact the empress of the butterfly world. In respect likewise to their natural relations, resulting either from their direct affinities with other groups of butterflies, or their more distant analogies both with other butterflies and other tribes of animals, invertebrated and vertebrated, these insects are so interesting, that I cannot but think that a few remarks, with reference especially to such relationships as they exhibit, may not be without advantage (affecting as they do the primary distribution of the whole of the butterflies—*Lepidoptera Diurna* or *Rhopalocera*—as well also as that of the primary groups of the *Annulosa* themselves), at a time when Lepidopterology counts so many votaries, who, however, for